CONSULTATION PAPER

NIGHT FLIGHTS AT HEATHROW, GATWICK AND STANSTED AIRPORTS

PROPOSALS FOR REVISED RESTRICTIONS FROM 24.10.93

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NIGHT FLIGHTS AT HEATHROW, GATWICK AND STANSTED

INTRODUCTION

1. Following a review of the then existing restrictions on night flying at Heathrow and Gatwick, a revised regime was introduced in April 1988 to last for five years. This now needs revision. The Government believes that restrictions should not only continue at Heathrow and Gatwick but also be extended at Stansted. At the same time it must not be forgotten that Heathrow is the world's leading international airport, and Gatwick is among the top half dozen. These airports have enormous importance for not only the local economies but the national economy as well. Stansted has similar potential. It is against this background that this consultation paper outlines proposals for a revised regime at Heathrow and Gatwick, together with a new regime for Stansted. These will come into effect for the winter season starting October 1993.

2. The proposals were developed after examining how the arrangements introduced in 1988 worked. Furthermore, in 1991 the European Civil Aviation Conference and the European Community adopted arrangements to phase out of use by 2002 older, noisier aircraft (the so-called chapter 2 types). The proposals build on principles in the current arrangements, but suggest changes. A new quota (which limits night flights) is proposed which would be reviewed after a further 5 years.

3. The paper is being sent to bodies representing both the aviation industry and people living near the airports. Further copies are available from the address at the end of this paper. We shall take into account all the comments received in response to this consultation before final decisions are made on a new night restrictions regime.

OBJECTIVES OF THE CURRENT REVIEW

4. The objectives of the review have been to:

(a) revise and update the arrangements as appropriate;

(b) introduce common arrangements for night restrictions at the 3 airports;

(c) establish further restrictions at Stansted as promised in the 1985 White Paper;

(d) continue to protect local communities from excessive aircraft noise levels at night;

(e) ensure that the competitive influences affecting UK airports and airlines and the wider employment and economic implications are taken into account.

BACKGROUND

5. Night flights have never been totally banned at Heathrow, Gatwick or Stansted. Restrictions on night flights at Heathrow first came into effect in 1962 in recognition of the strong feelings people have about being awakened by aircraft noise. Over the years the night restrictions at Heathrow have been reviewed from time to time and restrictions introduced at Gatwick and Stansted. The underlying principle, which has remained unchanged, has been to strike a balance between airlines wishing to operate services at night and people living round the airport who do not want their sleep disturbed by aircraft noise.

6. Technological developments have led to progressively quieter aircraft. The original noisiest types of jets have now been banned, and the next noisiest types will be phased out over the next decade. The night restrictions have favoured the use of quieter aircraft types. All this has brought benefits to those living in the neighbourhood of the airports.

7. Earlier reviews of night restrictions have taken account of the findings of research projects on sleep disturbance but have been circumscribed by the limited scope of those projects, and the inconclusive results. A more extensive research project was commissioned in 1990 to provide information on sleep disturbance to inform the present review.

CONCERNS OF LOCAL PEOPLE

8. Some members of the local communities and their Members of Parliament have argued that night flights at these airports should be further restricted and some have gone further in suggesting that all flights should ideally be banned. They argue that local people should not be exposed to the risk of sleep disturbance or noise nuisance during the night. They also consider that the effects on local people are likely to be more widespread and harmful at night. This is because most people are at home at this time and background noise levels, particularly in rural and residential areas, are well below daytime levels. The need for night flights is also questioned, with many feeling that passengers and most freight can conveniently be served by daytime flights.

9. Government has consistently recognised the need to ensure that local communities are not exposed to excessive levels of aircraft noise at night. The research conducted as part of the present review has provided further evidence of the effect on sleep. The proposals set out below aim to strike a fair balance between the different interests and do, in the Government's view, protect local people from excessive aircraft noise at night.

DEMAND FOR NIGHT FLIGHTS

10. Airports and airlines can only operate profitably if sufficient passengers want to use them. A variety of factors will influence the choices passengers make, including the timing of flights and their cost. If restrictions are imposed in the UK that means certain flights are not as convenient or their costs higher than competitors abroad can offer, the passengers will prefer alternatives that better suit their requirements.

11. Airports and operators abroad can in many cases offer attractive alternatives. For instance, Charles de Gaulle airport has no night restrictions, and Schipol and Frankfurt have less onerous ones than Heathrow or Gatwick. If convenient scheduled services on some long haul routes cannot be operated to Heathrow, Gatwick or Stansted, they will go to these other airports. Similarly if night restrictions at Gatwick - the main centre for

charter operations in the UK - or at other airports meant that UK operators could not utilise their aircraft on a basis that keeps costs and prices down, there would be a risk of foreign operators making substantial inroads into the market share of UK operators, with employment and wider economic losses in the UK. Various foreign operators are based at airports with no night restrictions, which means they can achieve the high utilisation of aircraft that keeps prices down - a crucial factor in attracting business in this highly competitive and price sensitive market.

12. Thus UK airports and airlines would lose business if prevented (by unduly restrictive night restrictions) from competing on reasonably equivalent terms. The ramifications would be much wider than just the immediate lost business. The status of UK airports and airlines would be diminished, and that in turn would diminish the attractions of London and the UK generally for investment and international commerce. These secondary effects might not be immediate but would be damaging in the long term to jobs and prosperity.

13. Demands for services to Heathrow and Gatwick are increasing despite the present recession. Both the scheduled and charter airlines believe their operations could be substantially improved by being allowed more movements during the night period, especially landings. At Heathrow, flights from the Asia - Pacific region (a major growth area), which previously landed early in the day-time after stopping en route, are now able to complete their journeys non-stop, and as a consequence are seeking to land during the night period. There are no commercially sensible alternative timings for such flights. Traffic to and from this region is forecast to grow strongly over the next 20 years. Continued growth in the North American market will also mean some operators seeking additional slots towards the end of the night period.

14. The charter companies also require the ability to operate in the night period. They operate in a highly competitive, price sensitive market, and need to contain costs as much as possible. The commercial viability of their business depends on high utilisation of their aircraft. This typically requires three

rotations a day to nearer destinations, which can only be fitted in using movements at night. This utilisation rate also makes it worthwhile for them to invest in modern, quieter aircraft.

15. There is also a continuing demand for some all-cargo flights at night carrying mail and other time-sensitive cargoes such as newspapers and perishable goods. (Also all-cargo movements are banned, whether arriving or departing, for much of the day at Heathrow.)

NIGHT RESTRICTIONS AT STANSTED

16. Stansted traffic has now passed 2 million passengers per annum (mppa). This is the level at which it was considered appropriate to introduce a noise insulation grants scheme as a noise mitigation measure in line with the undertaking in the 1985 White Paper. As traffic at Stansted is growing, it seems appropriate to introduce further night restrictions, related to its permitted level of operation, currently up to 8 mppa. This would ensure that Stansted has equitable treatment with Heathrow and Gatwick.

ANOMALIES IN THE PRESENT SYSTEM OF CLASSIFICATION

17. The current system requires most aircraft to be classified into one of three Night Noise groups (NN/A, B and C) by the calculation of the 95 PNdB (Perceived Noise Decibel) footprint for each aircraft type and engine combination, based on a specified set of operational procedures, and, in the case of NN/C aircraft, on maximum certificated take-off weight. NN/B aircraft are classified separately for landing and take-off, and either maximum take-off weight or maximum landing weight is taken into account as appropriate. The calculation is done by the Civil Aviation Authority's Department of Safety, Environment and Engineering (DSEE), who obtain noise data from the aircraft manufacturer. Criticisms have been made of this classification system, including:

a) the footprint calculation has to be carried out specially for this purpose and has no other use;

b) anomalies exist between those aircraft classified as NN/B at a reduced take-off weight (an arrangement carried over from the preceding restrictions regime) and more recent applications from similar aircraft which are not allowed classification at a reduced take-off weight; and

c) aircraft not meeting the NN/C criteria based on take-off noise are disadvantaged if they wish to land in the night period.

18. Airlines are also concerned that different night noise classification systems will apply in different countries. International agreement has been reached on various standards aircraft should meet, for example on safety and on noise. It seems sensible to seek a uniform approach to night noise classification, based on noise data produced as part of the certification tests used to show whether aircraft types comply with international standards. This issue is being explored with other European countries.

19. Airlines' scheduling difficulties are also exacerbated by the changes in the definition of "night" between the seasons and between weekdays and Sundays in winter. With scheduled services increasingly following a common pattern week by week throughout the year, it would be appropriate to standardize the hours covered by the quota.

SLEEP DISTURBANCE

20. To inform the present review, research into sleep disturbance was commissioned in July 1990, and the fieldwork carried out between March - September 1991. Dr J B Ollerhead of the CAA/DSEE was appointed technical project manager and the research team was led by Professor J A Horne, Loughborough University, Dr K I Hume, Manchester Metropolitan University and Professor I D Diamond, University of Southampton. A Steering Group was set up to oversee the research and included representatives of BAA plc, the Heathrow, Gatwick, Stansted and Manchester Airport companies, representatives of local communities nominated by the four Airport Consultative Committees and of the International Air Transport Association.

21. The main purpose of the study was to provide objective information on sleep disturbance from aircraft noise. Scientific measurements of disturbance were obtained from subjects living in the vicinity of Heathrow, Gatwick, Stansted and Manchester airports. (Manchester was included in the study because it is the third largest airport in the UK and currently has the highest number of night flights in the summer season.) The scope of this research was the most comprehensive of its kind ever conducted.

22. The results of the research show how aircraft noise at night affects people's sleep. It was found that external noise levels below 80 dB(A) are very unlikely to cause any increase in the normal rate of disturbance in someone's sleep. With noise levels in the range of 80-95 dB(A) the likelihood of the average person being awakened is about 1 in 75. The great majority of awakenings are the result of other causes, and most are not remembered the next morning. The number of disturbances caused by aircraft noise is so small that it has a negligible effect on overall normal disturbance rates. Disturbance rates from all causes are not at a level likely to affect people's health or well-being.

23. A summary of the research and its findings is being made available with this consultation paper. A copy of the full report may be obtained from DOT (price £11.00).

THE PROPOSALS ARISING FROM THE REVIEW

24. In the light of the considerations discussed above, proposals for new night restrictions have been developed. They are set out below.

DEFINITION OF NIGHT PERIOD AND MAIN RESTRICTIONS

25. Daytime noise impact is assessed from noise produced on the basis of a 16 hour day running from 0700-2300. That implicitly defines the night period as 2300-0700, and it is proposed to adopt this formally as the night period. This is currently the period during which the night noise limit for individual take-offs applies. This period would be the same at all three

airports for both winter and summer seasons and for all days of the week. During this period the noisiest types of aircraft could not be scheduled to land or take-off. Aircraft taking off would have to meet the night-time noise limit, of 102 PNdB at noise monitors near the airport. (The daytime noise limit for take-offs is currently 110 PNdB.) In addition from 23:30 - 06:00, aircraft movements would be subject to limits, described below.

CLASSIFICATION AND QUOTA SYSTEM

Classification of aircraft

26. It is proposed to introduce a new classification system based on the noise certification data which all modern aircraft are required to possess. The use of such data in this way is being discussed with several European countries with the hope of evolving a common approach.

27. Under the proposed new system, aircraft would be classified into 6 categories, depending on their noise certification data (the data collected when testing whether aircraft meet international noise standards). They would be classified separately for landing and taking-off into categories of 3-EPNdB bands. (EPNdB is a specialised noise unit used for aircraft noise certification testing. 3 EPNdB represents a doubling of noise energy.) The classification for landings would be based on the certificated approach noise level. For departures, it would be based on a combination of the certification "sideline" and "flyover" noise levels, and the maximum certificated take-off weight of the individual aircraft. Aircraft series and engine configuration would be fully taken into account. The proposed classification for current types of aircraft are given at Appendix 2. New types would be classified on the same basis as they came into operation.

New Quota System

28. At present certain types of aircraft which operate at night are exempt from the night restrictions. Generally, their noise level is below 90 EPNdB. Under the new system all aircraft will

be classified according to their noise data but the very quietest - those with a certificated noise level below 90 EPNdB - will be zero rated ie they will not count against the quota.

29. 90 EPNdB equates to a peak noise level of about 75 dB(A) (the unit generally used to measure noise). The sleep research concluded that noise from aircraft below 80 dB(A) was most unlikely to cause disturbance. 80 dB(A) outside the home is about the same noise as would be heard at nearly 500 feet from an Intercity train travelling at 95 mph.

30. Aircraft in the next quietest group (90-93 EPNdB) would count 1 against the quota, those in the next group (93-96) would count as 2, and the next (96-99) would count 4. Above 99 EPNdB, aircraft would not normally be permitted to operate but if exceptionally they did, they would count 8 or for the very noisiest types, 16.

31. The system would cover Concorde, bringing it formally within the ambit of night restrictions for the first time. BA have not planned operations by Concorde at night. However making the aircraft subject to night restrictions will ensure that proper account is taken of the noise effects of any unplanned night movements by the aircraft and that it will be subject to the same arrangements for dispensations, penalties and monitoring as any other aircraft.

32. Under the present quota system the number of movements that aircraft in a particular noise category are permitted to make has been specified at Gatwick, but at Heathrow only the total number of permitted movements has been specified. At Gatwick, the quota for noisier aircraft was reduced over the 5 year period, while the quota for quieter aircraft was increased. The numbers were scaled so that although the total number of movements increased the noise would be less.

33. The new system builds on this principle. It is designed to encourage the use of quieter aircraft by making noisier types use more of the quota for each movement. But it also gives operators

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flexibility to choose between less movements by noisier aircraft or more movements by quieter ones.

SIZE OF NEW QUOTA

34. Since 1988, more of the quieter types of aircraft have been acquired by airlines, improving the night noise climate. In keeping with the undertaking given in 1988 not to allow a worsening of noise at night, and ideally to improve it, it is proposed that the quota for the next 5 years based on the new quota system should be set at a level so as to keep overall noise levels below those in 1988. For Heathrow the proposed summer noise quota is 7,000 and for Gatwick 9,000. The 1988 summer quota for Heathrow would have been about 8000 if calculated on the new basis, and the summer quota for Gatwick about 11,450.

35. At Stansted, where no quotas have previously been set, it is proposed to introduce a quota linked to the permitted levels of the airport's development and on a pro rata basis with Gatwick. The proposal is that the quota should be a third of that for Gatwick while the 8 mppa (78,000 ATMs) limit is in force, rising to two thirds if Parliament approves the 15 mppa limit, and the full quota if a second terminal is approved. On this basis the Stansted quota will not inhibit development of the airport but it will afford local communities protection from night noise on the same basis as people living around Gatwick and Heathrow. Having the same rules will prevent Stansted from becoming a dumping ground for noisy aircraft not allowed to operate at other airports.

36. It is proposed to continue the policy of applying separate quotas to the Winter and Summer seasons, with the winter season quota being 5/7 of the summer season one. This will remove the large difference that currently exists at Gatwick between the seasons to allow for the growth of year-round scheduled services and more winter charter operations. The proposed noise quotas are set out in full in the table below.

PROPOSED QUOTAS

Winter 1993/4 to Summer 1998 inclusive. Figures in new quota units.

	Winter	Summer
HEATHROW	5000	7000
GATWICK	6450	9000
STANSTED while 78,000 ATM limit (corresponding to 8 mppa) in force	2150	3000
STANSTED when limit lifted to 15 mppa	4300	6000
STANSTED if second terminal approved	6450	9000

These quotas do not represent the number of flights. That will depend on the types of aircraft used and how many quota units they use for each movement.

END OF SEASON FLEXIBILITY

37. Under the present system at Heathrow, an airport operator is allowed to carry over any unused quota into the following season up to a maximum of 50. It can also bring forward up to 50 from the next season if there is a slight overrun in the current season. (If the overrun exceeds 50, the following season's quota is reduced by double the excess.) This allows a degree of flexibility which has proved useful and which recognises that the summer/winter seasons vary in length from year to year. We propose to allow the three airports to carry over into the next season up to 5% of the quota if there is a surplus or to anticipate up to 5% of the quota of the following season if there is an overrun. If the overrun exceeded 5%, the next season's quota would be reduced by double the excess over 5%. This will continue the flexibility of the existing system

without any overall increase in the quota.

DELAYED QUOTA, DISPENSATIONS

38. Under the proposed new regime, there would no longer be a separate quota for delayed departures. These would have to be accommodated within the overall quota, subject to the classification criteria and the arrangements described in Appendix 3. There would continue to be some provision for disregarding flights from the quota in certain circumstances. We are proposing that the airport companies should administer these within guidelines set down by the Department. The proposed guidelines are set out in Appendix 3.

39. The airports will continue to administer the night restrictions, but will in future provide quarterly reports about the operation of the scheme, including quota usage and dispensations given, to the airport consultative committees. This will be in addition to the reports they already make to the Department. This will give local people the opportunity to assess how the night restrictions are being administered.

REVIEW OF NOISE LIMITS FOR INDIVIDUAL AIRCRAFT: MONITORING OF NOISE CLASSIFICATIONS

40. The new Noise and Track monitoring system installed at the three airports (which replaced the existing noise monitors at Heathrow and Gatwick and introduced permanent noise monitoring at Stansted for the first time) will monitor the noise made by aircraft to ensure compliance with the maximum noise levels that currently apply for individual departures (102 PNdB for the period 2300-0700 and the substantially higher level, 110 PNdB, for the day period).

41. These noise limits have remained unchanged for over 25 years, during which time aircraft have become considerably quieter. As promised earlier, now that the new noise and track monitoring system is operational it would be appropriate to review the noise limits. We propose to initiate this review and to conduct it through the Aircraft Noise Monitoring Advisory Committee (ANMAC). This committee is chaired by the Department

of Transport and comprises representatives of the airlines, airports and local airport consultative committees.

42. We also propose that data from the new Noise and Track monitoring system should be used to verify the relative noise classification of aircraft types set out in Appendix 2. If over a period of time an aircraft or aircraft type produces noise levels significantly higher or lower than the average for its category, its classification (whether for landing or taking off) would be reconsidered. We propose this should also be overseen by ANMAC.

PENALTIES

43. Instead of the present system of penalties (see paragraph 8 of Appendix 1) BAA have proposed that if the night-time noise limit is breached at any of the three airports, the aircraft owner will incur a financial penalty. It is consulting airlines about this.

DURATION OF RESTRICTIONS

44. The intention is that the new classification system would become permanent and should only be reviewed if an international system for night noise restrictions were in prospect. The size of the quota would be reviewed after 5 years. Together, these would provide certainty and stability for airline operators in planning aircraft acquisitions for many years ahead and would provide continuing protection for local communities from excessive noise disturbance at night.

45. If the UK were ever to adopt Central European Time, the implications for night restrictions would need to be evaluated.

COMMENTS ON THE PROPOSALS

46. The proposals described in this paper will affect both the aviation industry and local people and businesses, who, although benefitting from the increased prosperity and job creation the airports bring, also suffer the intrusion of aircraft noise. The attention of airline operators is drawn particularly to the Notes

on the final page of the proposed classification system (Appendix 2) inviting additional data to assist the classification of particular aircraft.

47. Comments on this consultation paper should be sent to the address below by Friday 30 April 1993. All comments received will be taken into consideration. The intention is that the new restrictions should apply from 24 October 1993, the start of the Winter season. We will need to announce decisions in time to allow airlines to plan accordingly.

The Department of Transport
Civil Aviation Policy Division 4B
Room S9/08
2 Marsham Street
LONDON SW1P 3EB

January 1993

APPENDIX 1

THE PRESENT NIGHT RESTRICTIONS

1. The present night restrictions at Heathrow and Gatwick airports have applied since April 1988. The intention was that they should be reviewed after 5 years.

Aircraft Classification

2. For the purposes of the restrictions, aircraft are classified into Night Noise categories NN/A, NN/B and NN/C, with NN/A covering the noisiest types banned from operating at night under normal circumstances. Classification as NN/C depends on an aircraft's 95 PNdB noise footprint area on take-off. (The intention in using take-off noise as the criterion was to encourage airlines to move to using aircraft that are quiet on take-off, thus benefitting the daytime noise climate as well as the night. However, it produces some inconsistencies in relation to night time operations.) Aircraft may be classified as NN/B on landing or taking off, when the relevant maximum certificated take-off or landing weight is taken into account.

Period of Night

3. The restrictions specify the night period (generally 23:30 to 06:00, but extended to 06:30 on winter weekdays, 08:00 winter Sundays, and 08:00 for Summer Sunday departures from Heathrow), the duration of the summer and winter seasons (the former corresponds with British Summer Time), and which aircraft types may operate at night.

Quotas

4. Small aircraft are exempt from the restrictions at all three

airports, and the noisiest types of aircraft are not normally allowed to operate at night (except for a small number of delayed departures). In the cases of Heathrow and Gatwick, quotas are imposed on the less noisy night flights, those classified as NN/B or NN/C. Within the quotas, airlines may operate services as they wish. The quotas are not subdivided across the hours of the night or between types of services such as scheduled, charter or all-cargo operations.

5. The present restrictions at Heathrow and Gatwick were designed to prevent an increase in night noise at Heathrow and to secure an improvement at Gatwick. To that end, the Heathrow quota was reduced to the level of usage then prevailing. The level of quota was 2750 in Summer and 3000 in Winter for the five years. The quota is not subdivided between NN/B and NN/C but there is a period between 00:30 and 05:00 local time when only planned departures by modern, quieter (NN/C) aircraft are allowed. At Gatwick a progressive switch to quieter aircraft was encouraged by reducing the NN/B quota while increasing that for NN/C over the five years. The numbers were calculated to permit an overall increase in the number of night movements without any detriment to the noise climate.

Dispensations

6. Under the present arrangements, the airport operator has the power to disregard movements in certain circumstances specified by the Secretary of State. The Department also has powers to disregard flights.

Concorde

7. Concorde is, strictly speaking, exempt from the night restrictions and could operate at night. For noise mitigation purposes, BA agreed that it should not fly within the night restrictions period except in exceptional circumstances.

Penalties

8. Penalties are included in the system. Each infringement of the night noise limit of 102 PNdB from 23:00 - 07:00 at

Heathrow or Gatwick results in a reduction in the quota. At Heathrow, if the quota in one season is exceeded on 50 or fewer occasions, the quota for the following season is reduced by the same amount. Any excess of the quota on more than 50 occasions incurs more severe penalties, as, for each movement over 50, the quota for the following season is reduced by two.

9. It was not found necessary to draw any distinctions between the various types of services wishing to operate at night (for example between scheduled passenger services, charter flights and all-cargo operations) but differences in the demand for these services at Heathrow and Gatwick are reflected in the present differences in the night restrictions and different patterns of night flights between those airports.

PROPOSED NOISE CLASSIFICATION FOR NIGHT OPERATIONS

This Appendix shows the proposed noise classification for current types of aircraft as described in paragraph 27 of the consultation paper. Aircraft are classified separately for the purposes of landing and taking off. The classification for landing - arrivals - is given at pages 2 to 6 of this Appendix; the classification for taking off - departures - is given at pages 7 to 11.

Aircraft are listed alphabetically according to type. The engine type and any acoustical or other treatment necessary to enable the aircraft to achieve its noise certification are also indicated. The entry in the column headed QC/0, QC/1, QC/2, QC/4, QC/8, and QC/16 indicates the maximum certificated landing or take off weight for that aircraft which will meet the appropriate QC rating. For example Airbus A300 B2-1C with CF - 50C or C2R engines with a maximum certificated landing weight up to and including 128.00 tonnes will be classified as QC/2 for arrivals. This means that any arrival by this type of aircraft during the night quota period will count as 2 units against the quota.

Notes explaining the noise criteria on which this classification is based are given at page 12 of this Appendix. Some aircraft have been classified only on the basis of estimated, provisional or incomplete data. These are designated E, * and X respectively. Operators wishing to operate any such aircraft from Heathrow, Gatwick or Stansted during the night restrictions period should send details of the relevant noise certification or other suitable data to the address shown on page 12 of this Appendix.

ARRIVALS			Maximum certificated landing weight - tonnes						
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9	
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16	
Aeroplane	Engine	Remarks							
Airbus A300B2-1C	CF6-50C, C2R				128.00				
Airbus A300B2-203	CF6-50C2	Mod.2150 (short nozzle)			130.00				
Airbus A300B2-203	CF6-50C2	Mod.3305,2150 (short nozzle)			130.00				
Airbus A300B2-203	CF6-50C2				130.00				
Airbus A300B2-320	JT9D-59A				136.00				
Airbus A300B2-320	JT9D-59A	Mod.3305			134.00				
Airbus A300B2K-3C	CF6-50C, C2R				130.00				
Airbus A300B2K-3C	CF6-50C, C2R	Mod.3305,2150 (short nozzle)			130.00				
Airbus A300B4(or C4, F4)-203	CF6-50C2	Mod.2150 (short nozzle)			134.00				
Airbus A300B4(or C4, F4)-203	CF6-50C2	Mod.3305,3373			134.00				
Airbus A300B4-103	CF6-50C2				133.00				
Airbus A300B4-103	CF6-50C2	Mod.2150			133.00				
Airbus A300B4-103	CF6-50C2	Mod.3305,3373			133.00				
Airbus A300B4-120	JT9D-59A				133.00				
Airbus A300B4-203	CF6-50C2				134.00				
Airbus A300B4-220	JT9D-59A				134.00				
Airbus A300B4-2C	CF6-50C2, C2R				133.00				
Airbus A300B4-2C	CF6-50C2, C2R	Mod.3305,2150 (short nozzle)			134.00				
Airbus A300B4-2C	CF6-50C2, C2R	Mod.3373			134.00				
Airbus A300B4-601	CF6-80C2A1			138.00					
Airbus A300B4-603	CF6-80C2A3			138.00					
Airbus A300B4-605R	CF6-80C2A5			140.00					
Airbus A300B4-620	JT9D-7R4H1			138.00					
Airbus A300B4-622	PW4158			138.00					
Airbus A300B4-622	PW4158	Mod.8550 (JAS-kit)		138.00					
Airbus A300B4-622R	PW4158	"B-package" -622 are equivalent		140.00					
Airbus A300B4-622R	PW4158	Mod.8550 (JAS-kit)		140.00					
Airbus A310-203	CF6-80A3			121.50					
Airbus A310-203C	CF6-80A3			122.00					
Airbus A310-203C	CF6-80A3	Mod.5327,5771 & 604		122.00					
Airbus A310-204	CF6-80C2A2		122.00						
Airbus A310-221	JT9D-7R4D1			118.50					
Airbus A310-222	JT9D-7R4E1			121.50					
Airbus A310-300	CF6-80C2A		Ē						
Airbus A310-304	CF6-80C2A2		123.00						
Airbus A310-308	CF6-80C2A8		123.00						
Airbus A310-322	JT9D-7R4E1			123.00					
Airbus A310-324	PW4152			123.01					
Airbus A310-324	PW4152	Mod.8921 ("B-package")		123.01					
Airbus A310-325	PW4156A			123.01					
Airbus A320-111	CFM56-5-A1		67.00						
Airbus A320-211	CFM56-5-A1		68.00						
Airbus A320-212	CFM56-5-A3	Eng. mods.20775,21478	68.00						
Airbus A320-231	V2500-A1		68.00						
Antonov 12 Cub	Ivchenko AI-20K	Cub = NATO designation			61.00				
Antonov 124							Ē		
ATR42-200	P&W PW120		15.50						
ATR42-300	P&W PW120		16.00						
B707-100B	JT3D-1	QNC Hushkit			86.18				
B707-100B	JT3D-3B	QNC Hushkit			86.18				
B707-120B	JT3D-1	SHANNON Hushkit				86.18			
B707-138B	JT3D-1	SHANNON Hushkit				86.18			
B707-300B ADV/C	JT3D-1-3B(IC)	SHANNON Hushkit				112.04			
B707-300B ADV/C	JT3D-3B	QNC Hushkit				112.26			
B707-300B ADV/C	JT3D-3B	SHANNON Hushkit					108.86		
B707-300B ADV/C	JT3D-7	SHANNON Hushkit					91.17		
B707-300C (ADV)	JT3D-3B	TRACOR/SHANNON (COMTRAN) Hushkit					Ē		
B720B	JT3D-1	QNC Hushkit		79.38					
B720B	JT3D-1	SHANNON Hushkit			79.38				
B720B	JT3D-3B	QNC Hushkit		79.38					
B720B	JT3D-3B	SHANNON Hushkit			79.38				
B727-100	JT8D-7FCD, 7AFCD					68.63			x
B727-100 (FED.EX.)	JT8D-7/A/B	With Boeing nacelle	62.37						
B727-100 (FED.EX.)	JT8D-9/A	Burbank Aeronautical Corp. nac.	64.41						
B727-100RE	JT8D-9, -9A, -217	VALSAN reengine & hushkit	54.88						
B727-200	JT8D-15QN,-17QN,-17RQN				Ē				
B727-200	JT8D-9QN					76.20			x
B727-200 (FED. EX.)	JT8D-7/A/B	Burbank Aeronautical Corp. nac.		70.08					
B727-200 (FED. EX.)	JT8D-7B(A) (B)	Boeing nacelle		68.04					
B727-200 (FED. EX.)	JT8D-7B(A) (B)	Burbank Aeronautical Corp. nac.	68.04						
B727-200 (FED. EX.)	JT8D-9/A	Burbank Aeronautical Corp. nac.		68.04					

ARRIVALS			Maximum certificated landing weight - tonnes						
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9	
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16	
Aeroplane	Engine	Remarks							
B727-200RE	2 JT8D-217C & 1 JT8D-15	VALSAN hushkit	67.13						
B727-200RE	2 JT8D-217C & 1 JT8D-17	VALSAN hushkit		72.12					
B727-200RE	2 JT8D-217C & 1 JT8D-17A	VALSAN hushkit		72.12					
B737-200	JT8D-15	NORDAM hushkit		47.63					
B737-200	JT8D-9QN					47.17			x
B737-200ADV	JT8D-15	NORDAM hushkit	48.53						
B737-200ADV	JT8D-15AQN, -17QN, -17AQN				E				
B737-200ADV	JT8D-9QN					49.17			x
B737-300	CFM56-3B-1			54.43					
B737-300	CFM56-3B-2			51.71					
B737-400	CFM56-3B-2			56.25					
B737-400	CFM56-3C-1			56.00					
B737-500	CFM56-3-B1			51.71					
B737-500	CFM56-3-B1(R)			49.90					
B737-500	CFM56-3-C1/-B1/-B2			51.70					*
B747-100	JT9D-3A (DRY)	100 "CN" nacelles					265.35		
B747-100	JT9D-3A (WET)	100 "CN" nacelles					265.35		
B747-100	JT9D-7/7A (DRY)	200"B" nacelles				265.35			
B747-100	JT9D-7/7A (WET)	200"B" nacelles				265.35			
B747-100	JT9D-7F versions						E		
B747-100/200/300	JT9D-3A	"200CN" nacelle			201.39	235.90			
B747-100/200/300	JT9D-3A	"100CN" nacelle			188.19	208.70			
B747-100/200/300	JT9D-7	"200CN" nacelle				212.20			x
B747-100/200/300	JT9D-7	"100CN" nacelle			201.39	235.90			
B747-100/200/300	JT9D-7A	"200CN" nacelle			218.69	265.40			
B747-100/200/300	JT9D-7A	"100CN" nacelle				206.00			x
B747-100/200/300	JT9D-7F	"200CN" nacelle				200.20			x
B747-100/200/300	JT9D-7F	"100CN" nacelle				285.80			
B747-100/200/300	JT9D-7J	"200CN" nacelle					285.80		x
B747-100/200/300	JT9D-7R4G2					285.76			
B747-100/200/300	RB211-524B2					265.35			
B747-100/200/300	RB211-524C2					265.35			
B747-100/200/300	RB211-524D4				289.99	302.00			
B747-200	CF6-50B2					272.20			
B747-200	JT8D-7J						E		
B747-200	JT9D-70A					285.76			
B747-200	JT9D-7F						285.80		x
B747-200	JT9D-7Q					282.00	304.49		
B747-200	RB211-524D4 -19/22					285.76			
B747-200	RB211-524D4X-19/22					285.76			x
B747-200B	CF6-50E					265.35			
B747-200B	JT9D-3A (DRY)	200"CN" nacelles				265.35			
B747-200B	JT9D-3A (DRY)	200"B" nacelle				265.35			
B747-200B	JT9D-3A (WET)	200"CN" nacelles				265.35			
B747-200B	JT9D-3A (WET)	200"B" nacelles				265.35			
B747-200B	JT9D-7/7A (DRY)	200"CN" nacelle				265.35			
B747-200B	JT9D-7/7A (DRY)	200"B" nacelle				265.35			
B747-200B	JT9D-7/7A (WET)	200"CN" nacelle				265.35			
B747-200B	JT9D-7/7A (WET)	200"B" nacelle				265.35			
B747-300	CF6-50B2					272.20			
B747-300	CF6-50E2					285.76			
B747-300	CF6-80C2B1				298.69	320.00			
B747-300	JT9D-7R402					285.76			
B747-300	JT9D-7R4G2					285.76			
B747-300/200 B,C & F	CF6-50E					285.76			
B747-400	CF6-80C2B1F				295.74				
B747-400	PW4056				295.08				
B747-400	RB211-524G				295.74				
B747-400	RB211-524H2				295.74				
B747-400D	CF6-80C2B1F				270.80				
B747-SP	JT9D-7A				210.92				
B747-SP	JT9D-7F				215.46				
B747-SP	JT9D-7J				215.46				
B747-SP	RB211-524B2				204.12				
B747-SP	RB211-524D4					185.97			
B747-SR	JT9D-7A					255.83			
B757-200	PW2037/2040		93.89						
B757-200	RB211-535C		95.26						x
B757-200	RB211-535E4		95.26						
B767-200	CF6-80A			116.57					
B767-200	JT9D-7R4D	"A" Eng. Install. BG700 series			120.00				
B767-200	JT9D-7R4D	"B" Eng. Install. BG800/BG900 series			118.00				
B767-200	JT9D-7R4E				136.07				

ARRIVALS			Maximum certificated landing weight - tonnes						
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9	
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16	
Aeroplane	Engine	Remarks							
B767-200/-200 ER	CF6-80C2B		136.08						
B767-200/-200 ER	CF6-80C2B2F2		131.50						
B767-200/-200 ER	CF6-80C2B4		136.08						
B767-200/-200 ER	CF6-80C2B4 F	N1 modifier	136.05						*
B767-200/-200 ER	JT9D-7R4D				122.47				
B767-200/-200 ER	PW4050		125.90						
B767-200/-200 ER	PW4052 (FB2T)		136.08						
B767-200/-200 ER	PW4056 (FB2B)		136.08						
B767-200/-200 ER	PW4060		125.90						
B767-200/-200 ER	PW4060A		125.90						
B767-200/200ER	JT9D-7R4E4				136.08				*
B767-200ER	JT9D-7R4E			119.34	136.05				
B767-300	CF6-80C2B6F	With N1 modifier	140.40						
B767-300	RB211-524G/H		134.59	145.15					*
B767-300 & -300ER	CF6-80C2B2F		139.30						
B767-300 & -300ER	CF6-80C2B4		145.15						
B767-300 & -300ER	CF6-80C2B6		145.15						
B767-300 & -300ER	CF6-80C2B6 (fadec)		145.15						
B767-300 & -300ER	PW4056 (FB2B)			145.15					
B767-300 & -300ER	PW4060 (FB2B)			145.15					
B767-300 & -300ER	RB211-524G			145.15					
B767-300 & -300ER	RB211-524H			145.15					
BAe ATP	P&W PW124A	Post mod AAN1010	22.25						
BAe ATP	P&W PW126	Post mod AAN 1010	22.25						
BAe ATP	P&W PW126	Pre mod AAN 1010	22.25						
BAe ATP	P&W PW126	AAN 1010 & beta-cam ABA493	22.25						
BAe ATP	P&W PW126A	AAN 1010 & beta-cam ABA493	22.25						
BAe Herald	RR Dart Mk 527		19.50						
BAe Jetstream 3100	Garret TPE 331		6.60						
BAe1-11 Series 200	Spey 506-14 A, AW or D	With mod.5320 Parts A, D & E		32.21					
BAe1-11 Series 300	Spey 511-14 or -14W	With mod.5320 Parts A, B, D & E		32.56					
BAe1-11 Series 400	Spey 511-14 or -14W	With mod.5320 Parts A, B, D & E		32.56					
BAe1-11 Series 475	Spey 512-14DW	With mod.5320 Parts A, B, D & E		38.10					
BAe1-11 Series 500	Spey 512-14 DW	With mod.5320 Parts A, B, D & E		39.46					
BAe1-11 Series 510	Spey 512-14 E	With mod.5320 Parts A, B, D & E		39.00					
BAe125 Series 600A	Viper 601-22	Mod. 252405			9.98				
BAe125 Series F3B	TFE-731-3-1H	Eng. mod.252603	9.07						
BAe125 Series F400	TFE-731-3-1H	Eng. mod.252551	9.07						
BAe125 Series F600B	TFE-731-3-1H	Eng.mod.252469	9.98						
BAe125- 800	TFE-731-5R-1H		10.59						
BAe125- 800A	TFE-731-5R-1H	with DH Reverser	10.59						
BAe125-1000	PW305		11.34						
BAe125-700A/-700B	TFE-731-3-1H		9.98						
BAe146-100	ALF 502R-3		32.82						
BAe146-100	ALF 502R-4		32.82						
BAe146-100	ALF 502R-5	plus option 71/1	33.27						
BAe146-100-20	ALF 502R-3		33.27						
BAe146-100-20	ALF 502R-3	plus option71/1	33.27						
BAe146-100-20	ALF 502R-3A	plus option71/1	33.27						
BAe146-100-20	ALF 502R-4		33.27						
BAe146-100-20	ALF 502R-4	plus option71/1	33.27						
BAe146-100-21	ALF 502R-5		33.27						
BAe146-100-31	ALF 502R-5	plus option71/1	35.15						
BAe146-100A	ALF 502R-3A	plus option71/1	33.27						
BAe146-200	ALF 502R-3	plus option71/1	35.15						
BAe146-200	ALF 502R-3A	plus option71/1	35.15						
BAe146-200	ALF 502R-5	plus option71/1	36.74						
BAe146-300	ALF 502R-5	plus option71/1	38.33						
Beechcraft King Air C90A	PW PT6A-21		4.58						
Beechcraft Super King Air 200	PW PT6A-135		4.94						
Canadair CL-600 Challenger	CF34-3A		16.33						
Canadair CL-601 Challenger	CF34-1A		16.33						
Caravelle B3	JT8D-7					49.44			
Caravelle B3	JT8D-9					49.44			
CASA C-212-CB	Garret TPE 331-5-251C		6.26						
CASA C-212-CC	Garret TPE 331-10-501C		7.35						
CASA CN-235	GE CT7-7A		14.20						
Cessna 500/501 Citation I	JT15D-1/-1A		5.13						
Cessna 550 Citation II	JT15D-4		6.12						
Cessna 650 Citation III	TFE731-3B-100S		9.07						
Concorde	RR Olympus 593 Mk610							185.07	
Convair 580	Allison 501-D13H		23.59						
Dassault Mercure 100A	JT8D-15				50.30				
Dassualt Mercure 100B	JT8D-15				52.16				
DC 8-62	JT3D-7	W/ADC QN Hushkit					113.40		

ARRIVALS			Maximum certificated landing weight - tonnes					
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16
Aeroplane	**Engine**	**Remarks**						
DC 8-62	JT3D-7	W/TNC QN Hushkit				124.74		
DC 8-63	JT3D-7	8AC/MGM Hushkit			124.74			
DC 8-71	CFM56-2-C1		117.03					
DC 8-71	CFM56-2C5		108.86					
DC 8-72	CFM56-2-C1		113.40					
DC 8-73	CFM56-2-C1		124.74					
DC 9-10	JT8D-7				37.06			
DC 9-10	JT8D-7/-7A			37.06				
DC 9-10(ABS)	JT8D-7/7A/7B		37.06					
DC 9-14/15	JT8D-7/7A	Hardwall				37.06		
DC 9-30	JT8D-11	Hardwall			44.50			
DC 9-30	JT8D-11/15			44.50				
DC 9-30	JT8D-17			44.50				
DC 9-30	JT8D-9	Hardwall			46.27			
DC 9-30	JT8D-9	Nacelle SCN3891/SCN3894		44.50				
DC 9-40	JT8D-11			46.27				
DC 9-40	JT8D-15			46.27				
DC 9-50	JT8D-17			49.90				
DC10-10/-15	CF6-50C2-F				164.50			
DC10-10/-15	CF6-6K				164.90			
DC10-30	CF6-50C					Ĕ		
DC10-30/30F	CF6-50A					186.43		
DC10-30/30F	CF6-50C					186.43		
DC10-30/30F	CF6-50C1					186.43		
DC10-30/30F	CF6-50C2					197.60		
DC10-30/30F	CF6-50C2-R					192.32		
DC10-30/30F	CF6-50C28					192.32		
DC10-40	JT9D-20					182.80		
DC10-40	JT9D-20J					Ĕ		
DC10-40	JT9D-59A					182.80		
DH Twin Otter DHC-6	PW PT6A-20		5.25					
DHC-7-101 (Dash 7)	P&W PT6A-50		18.60					
DHC-7-103 (Dash 7)	P&W PT6A-50		19.05					
DHC-8-101 (Dash 8)	UACL P&W PW120 or PW120A		15.38					
DHC-8-102 (Dash 8)	UACL P&W PW120 or PW120A		15.38					
DHC-8-311 (Dash 8)	UACL P&W PW123		19.05					
Embraer Bandeirante EMB-110	PW PT6A-34		5.67					
Embraer EMB-120	P&W PW-115		11.53					
Embraer EMB-120	P&W PW-118		11.53					
F27 MK200,400,500,600	RR Dart 532, 535, 536-7R, 536-7		19.73					
F27 Mk600	RR Dart Mk532-7R			19.05				
F28 Mk1000/2000	Spey Mk555-15			26.76				
F28 Mk4000	Spey Mk555-15H			29.85				
F28 Mk4000	Spey Mk555-15P			31.53				
Falcon 10	TFE 731-2		7.80					
Falcon 20	CF700-20-2				12.38			
Falcon 200	ATF3-6-4C		12.52					
Falcon 50	TFE 731-2		16.19					
Falcon 50	TFE731-3-1C		Ĕ					
Falcon 900	TFE 731-5A		19.05					
Falcon 900	TFE 731-5AR-1C		19.05					
Falcon 9008	TFE 731-5BR-1C		19.05					
Fokker F28 MK0100	TAY 620-15		38.78					
Fokker F28 MK0100	TAY 650-15		39.92					
Gulfstream G-I	RR Dart Mk 529		Ĕ					
Gulfstream G-II	RR Spey 511-8		26.53					
Gulfstream G-II	RR Spey 511-8	With tip tanks	Ĕ					
Gulfstream G-IIB	RR Spey 511-8		Ĕ					
Gulfstream G-III/-II8	RR Spey 511-8		26.53					
Gulfstream G-IV	Tay 610-8		26.53					
Gulfstream G-IV	Tay 611-8		26.53					
HS 748-2A	RR Dart 532-2				19.51			
HS 748-28	RR Dart 534-2/535-2/536-2				19.50			
HS 748-28	RR Dart 534-2/535-2/536-2	BAe mod 6408 or 6517	19.50					
Il-62M	D-30Ku	With noise suppressors		107.00				
Il-76T(TD)	D-30KP (D-30KP 2 ser.)						151.50	
Il-86	NK-86					175.00		
L1011-1	RB211-22B				162.39			
L1011-100	RB211-228				166.92			
L1011-200	R8211-524B			166.92				
L1011-385-1 -15	RB211-22B				166.92			
L1011-385-1 -15 193T	R8211-22B				162.39			
L1011-385-1-14 & -15	R8211-22B(+SB 72-8700)				166.92			

ARRIVALS			Maximum certificated landing weight - tonnes						
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9	
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16	
Aeroplane	**Engine**	**Remarks**							
L1011-500	RB211-524B			166.92					
L1011-500	RB211-524B3			166.92					
L1011-500	RB211-524B4				166.92				
Learjet 23	CJ610-1/-4		5.40						
Learjet 24	CJ610-1/-4		5.40						
Learjet 24/24D	CJ610-6			5.40					
Learjet 24D	CJ610-6		5.40						
Learjet 24E	CJ610-6		5.40						
Learjet 24F	CJ610-6		5.40						
Learjet 24F-A	CJ610-6		5.40						
Learjet 25	CJ610-6			6.03					
Learjet 25 B/C/D/F XR	CJ610-6/8A			6.03					
Learjet 28/29	CJ610-8A			6.49					
Learjet 35/36	TFE 731-2-2B		6.49						
Learjet 35A	TFE 731-2-2B		6.49						
Learjet 35A/36A	TFE 731-2-2B		6.94						
Learjet 55	TFE 731-3A-2B		7.71						
Learjet M55	TFE 731-3A	Aeronca thrust reverser	7.71						
Learjet M55	TFE 731-3A	Std. nozzle	8.16						
Learjet M55C	TFE 731-3A-3AR	With reverser	8.16						
Learjet M55C	TFE 731-3A-3AR -3B	With reverser	8.16						
Lockheed C130: see L100-30									*
Lockheed L 100-30 (Hercules)	Allison 501-D22A			59.87					
Lockheed L 118A Electra	Allison 501D-13		43.39						
Lockheed L 118C Electra	Allison 501D-13		44.50						
MD-11	CF6-80C2D1F					205.20			
MD-11	PW4460					213.87			
MD-80	JT8D-209		58.97						
MD-80	JT8D-217		68.00						
MD-80	JT8D-217A		68.00						
MD-80	JT8D-217C		68.00						
MD-80	JT8D-219		68.00						
MD-87	JT8D-217A		58.97						
MD-87	JT8D-217C		59.00						
MD-87	JT8D-219		59.00						
Pilatus Britten-Norman Islande	LYC. 0-540-E4C5		2.99						
Piper Aerostar PA-600P	LYC. IO-540-S1A5/-P1A5		2.72						
Piper Chieftain PA-31-350	LYC. TIO-540-J2BD		3.18						
Piper Navajo PA-31	LYC. TIO-540-2AC		2.95						
Puma SA 330F/G	Turmo IVA				7.40				
Reims Cessna F404	TCM GTSIO-520-M		3.81						
SAAB SF340A	GE CT7-5A		12.02						
SAAB SF340A	GE CT7-5A2		12.04						
SAAB SF340A	GE CT7-7E		12.02						
Sabreliner 65	TFE 731-3R		9.89						
Sabreliner 80	CF700-2D-2			9.98					
Shorts Belfast	RR Tyne 12		104.30						
Shorts SD330	P&W PT6A-45R		10.25						
Shorts SD360	P&W PT6A-65AR		11.84						
Shorts SD360	P&W PT6A-65R		11.84						
Shorts SD360-300	P&W PT6A-67R		12.02						
Swearingen Merlin III SA227-AC	TPE331-11U-601G		6.35						
TU-134	D-30 I ser.			40.00					
TU-134A	D-30 II ser.				43.00				
TU-134A-3	D-30 III ser.			43.00					
TU-134B	D-30 II ser.				43.00				
TU-134B-3	D-30 III ser.			43.00					
TU-154	NK-8-2u					78.00			
TU-154M	D-30 Ku-154	With noise suppressors			80.00				
Vanguard Freighter	RR Tyne Mk506		63.96						
Viscount	RR Dart 7/1 Mk525		32.89						
Yak-40	AI-25			14.70					
Yak-42	D-36	With noise suppressors			50.00				
Yukon				E					
Key: E = QC estimated; data									
* = recent data									
x = incomplete data									

DEPARTURES			Maximum certificated take off weight-tonnes						
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9	
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16	
Aeroplane	**Engine**	**Remarks**							
Airbus A300B2-1C	CF6-50C, C2R				142.00				
Airbus A300B2-203	CF6-50C2				142.00				
Airbus A300B2-203	CF6-50C2	Mod.2150 (short nozzle)			142.00				
Airbus A300B2-203	CF6-50C2	Mod.3305,2150 (short nozzle)			142.00				
Airbus A300B2-320	JT9D-59A				157.50				
Airbus A300B2K-3C	CF6-50C, C2R				142.00				
Airbus A300B2K-3C	CF6-50C, C2R	Mod.3305,2150 (short nozzle)			137.00				
Airbus A300B4-103	CF6-50C2				157.50				
Airbus A300B4-103	CF6-50C2	Mod.2150			157.50				
Airbus A300B4-103	CF6-50C2	Mod.3305,3373			157.50				
Airbus A300B4-120	JT9D-59A				160.00				
Airbus A300B4-220	JT9D-59A				165.00				
Airbus A300B4-2C	CF6-50C2, C2R				157.50				
Airbus A300B4-2C	CF6-50C2, C2R	Mod.3305,2150 (short nozzle)			150.00				
Airbus A300B4-2C	CF6-50C2, C2R	Mod.3373			150.00				
Airbus A300B4-601	CF6-80C2A1				165.00				
Airbus A300B4-603	CF6-80C2A3				165.00				
Airbus A300B4-605R	CF6-80C2A5				171.70				
Airbus A300B4-620	JT9D-7R4H1				165.00				
Airbus A300B4-622	PW4158				171.70				
Airbus A300B4-622	PW4158	Mod.8550 (JAS-kit)			171.70				
Airbus A300B4-622R	PW4158	"B-package" equipped A300-622 are equival			171.70				
Airbus A300B4-622R	PW4158	Mod.8550 (JAS-kit)		158.49	171.70				
Airbus A300B4/C4-203	CF6-50C2	Mod.2150 (short nozzle)			165.00				
Airbus A300B4/C4/F4-203	CF6-50C2				165.00				
Airbus A300B4/C4/F4-203	CF6-50C2	Mod.3305,3373			165.00				
Airbus A300F4-203	CF6-50C2	Mod.2150 (short nozzle)			165.00				
Airbus A310-203	CF6-80A3				142.00				
Airbus A310-203C	CF6-80A3			133.19	142.00				
Airbus A310-203C	CF6-80A3	Mod.5327,5771 & 604		130.69	142.00				
Airbus A310-204	CF6-80C2A2			144.79	160.00				
Airbus A310-221	JT9D-7R4D1				142.00				x
Airbus A310-222	JT9D-7R4E1				142.00				x
Airbus A310-300	CF6-80C2A				E				
Airbus A310-304	CF6-80C2A2			144.69	157.00				
Airbus A310-308	CF6-80C2A8				164.00				
Airbus A310-322	JT9D-7R4E1				153.00				
Airbus A310-324	PW4152				157.00				
Airbus A310-324	PW4152	Mod.8921 ("B-package")			157.00				
Airbus A310-325	PW4156A				164.00				
Airbus A320-111	CFM56-5-A1		67.39	77.00					
Airbus A320-211	CFM56-5-A1		67.79	78.00					
Airbus A320-212	CFM56-5-A3	Eng. mods. 20775,21478	70.49	78.00					
Airbus A320-231	V2500-A1		75.24	78.00					
Antonov 12 Cub	Ivchenko AI-20K	Cub = NATO designation			61.00				
Antonov 124								E	
ATR42-200	P&W PW120	Full Power	15.75						
ATR42-300	P&W PW120	Full Power	16.15						
B707-100B	JT3D-1	QNC Hushkit						109.45	
B707-100B	JT3D-3B	QNC Hushkit						117.03	
B707-120B	JT3D-1	SHANNON Hushkit					117.03		
B707-138B	JT3D-1	SHANNON Hushkit					117.03		
B707-300B ADV/C	JT3D-1-3B(IC)	SHANNON Hushkit					146.19		
B707-300B ADV/C	JT3D-3B	QNC Hushkit					151.95		
B707-300B ADV/C	JT3D-3B	SHANNON Hushkit					145.60		
B707-300B ADV/C	JT3D-7	SHANNON Hushkit					149.69		
B707-300C (ADV)	JT3D-3B	TRACOR/SHANNON (COMTRAN) Hushkit						150.96	
B720B	JT3D-1	QNC Hushkit						106.14	
B720B	JT3D-1	SHANNON Hushkit				106.14			
B720B	JT3D-3B	QNC Hushkit					106.14		
B720B	JT3D-3B	SHANNON Hushkit				106.14			
B727-100	JT8D-7FCD, 7AFCD						80.51		x
B727-100 (FEO.EX.)	JT8D-7/A/B	With Boeing nacelle			76.88				
B727-100 (FED.EX.)	JT8D-9/A	With Burbank Aeronautical Corp. nac.			76.88				
B727-100RE	1 JT8D-9, -9A, -217	VALSAN hushkit					E		
B727-200	JT8D-15QN						86.40		*
B727-200	JT8D-17QN						88.22	92.13	*
B727-200	JT8D-17RQN						87.45	94.34	*
B727-200	JT8D-9QN						82.10		x
B727-200 (FEO. EX.)	JT8D-7/A/B	With Burbank Aeronautical Corp. n				80.60			
B727-200 (FED. EX.)	JT8D-7B(A) (B)	With Boeing nacelle				78.30			
B727-200 (FEO. EX.)	JT8D-7B(A) (B)	With Burbank Aeronautical Corp. nac.				78.30			

DEPARTURES			Maximum certificated take off weight - tonnes						
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9	
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16	
Aeroplane	Engine	Remarks							
B727-200 (FED. EX.)	JT8D-9/A	With Burbank Aeronautical Corp. nac.			76.88				
B727-200RE	2 JT8D-217C & 1 JT8D-15	VALSAN hushkit			86.41				
B727-200RE	2 JT8D-217C & 1 JT80-17	VALSAN hushkit			90.04				
B727-200RE	2 JT8D-217C & 1 JT8D-17A	VALSAN hushkit				95.03			
B737-200	JT8D-15	NORDAM hushkit		52.40					
B737-200	JT8D-9QN				46.49	53.08			
B737-200ADV	JT8D-15	NORDAM hushkit		52.40					
B737-200ADV	JT80-15AQN, -17QN, -17AQN						Ē		
B737-200ADV	JT8D-9QN					55.57			
B737-300	CFM56-3B-1		62.82						
B737-300	CFM56-3B-2		62.41						
B737-400	CFM56-3B-2		63.80						
B737-400	CFM56-3C-1		67.52	68.04					
B737-500	CFM56-3-B1		59.10						
B737-500	CFM56-3-B1(R)		59.05						
B737-500	CFM56-3-C1	20,000lb sea level static thrust	63.05						*
B737-500	CFM56-3-C1/-B1/-B2	18,500lb sea level static thrust	62.30						*
B747-100	JT9D-3A (DRY)	100"CN" nacelles						332.48	
B747-100	JT9D-3A (WET)	100"CN" nacelles						333.39	
B747-100	JT9D-7/7A (DRY)	200"B" nacelles						332.48	
B747-100	JT90-7/7A (WET)	200"B" nacelles						333.39	
B747-100	JT90-7F versions							Ē	
B747-100/200/300	JT9D-3A	With "200CN" nacelles						319.80	
B747-100/200/300	JT90-3A	With "100CN" nacelles						317.20	
B747-100/200/300	JT90-7	With "200CN" nacelles						327.50	
B747-100/200/300	JT9D-7	With "100CN" nacelles						326.10	
B747-100/200/300	JT9D-7A	With "200CN" nacelles					325.70		
B747-100/200/300	JT9D-7A	With "100CN" nacelles						332.90	
B747-100/200/300	JT9D-7F	With "200CN" nacelles						335.30	x
B747-100/200/300	JT9D-7F	With "100CN" nacelles						340.20	
B747-100/200/300	JT9D-7J	With "200CN" nacelles					333.79	343.50	
B747-100/200/300	JT9D-7R4G2					329.99	369.70		
B747-100/200/300	RB211-524B2						372.59	376.80	
B747-100/200/300	RB211-524C2						374.19	377.80	
B747-100/200/300	RB211-524D4						377.80		
B747-200	JT9D-70A						371.95		x
B747-200	JT9D-7J							359.34	
B747-200	JT9D-7Q						377.80		
B747-200	RB211-524D4-19/22						372.00		
B747-200	RB211-524D4X-19/22						377.80		
B747-200/300	CF6-50B2						372.80		
B747-200B	CF6-50E						351.50		
B747-200B	JT9D-3A (DRY)	200"CN" nacelles						348.00	
B747-200B	JT9D-3A (DRY)	200"B" nacelles						347.90	
B747-200B	JT9D-3A (WET)	200"CN" nacelles						350.05	
B747-200B	JT9D-3A (WET)	200"B" nacelles						350.60	
B747-200B	JT9D-7/7A (DRY)	200"CN" nacelles						356.10	
B747-200B	JT9D-7/7A (DRY)	200"B" nacelles						351.53	
B747-200B	JT9D-7/7A (WET)	200"CN" nacelles						351.53	
B747-200B	JT9D-7/7A (WET)	200"B" nacelles						351.53	
B747-200B	JT9D-7F							368.30	
B747-200B	JT9D-7J	200"CN" nacelles						362.90	
B747-200B	JT9D-7Q						369.00		
B747-300	CF6-50E2						362.87		
B747-300	CF6-B0C2B1				310.79	375.30			
B747-300	JT9D-7R4G2						372.00		
B747-300/200 B,C & F	CF6-50E							285.76	
B747-400	CF6-80C2B1F				317.19	394.63			
B747-400	PW4056				292.19	370.57	437.72		
B747-400	RB211-524G						394.63		x
B747-400	RB211-524H2				308.29	394.63			
B747-400D	CF6-80C2B1F				312.29				
B747-400D	CF6-80C2B1F	With N1 mod.			313.39	377.80			
B747-SP	JT9D-7A						317.95		
B747-SP	JT9D-7F						299.37		
B747-SP	JT90-7J						Ē		
B747-SP	RB211-524B2						315.70		
B747-SP	RB211-524D4						318.42		
B747-SR	JT9D-7A						276.70		
B757-200	PW2037			112.40					
B757-200	PW2040		115.90						
B757-200	RB211-535C			108.90					x
B757-200	RB211-535E4		115.80						
B767-200	CF6-80A			156.40					
B767-200	JT9D-7R4D	Package "A" Eng. Install. No. BG700 series		138.39	156.60				

DEPARTURES			Maximum certificated take off weight - tonnes						
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9	
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16	
Aeroplane	Engine	Remarks							
B767-200	JT9D-7R4D	"B" Eng. Install. No. BG800/BG900 series		134.99	156.60				
B767-200	JT9D-7R4E			136.06	160.57				
B767-200/-200 ER	CF6-80C2B			159.00					
B767-200/-200 ER	CF6-80C2B2F			153.80					
B767-200/-200 ER	CF6-80C2B4			173.50					
B767-200/-200 ER	CF6-80C2B4F	N1 Modifier		163.50					*
B767-200/-200 ER	JT9D-7R4D			159.20					
B767-200/-200 ER	PW4050				170.20				
B767-200/-200 ER	PW4052 (FB2T)			159.20					
B767-200/-200 ER	PW4056 (FB2B)			162.79	181.50				
B767-200/-200 ER	PW4060				172.00				
B767-200/-200 ER	PW4060A				169.30				
B767-200/-200ER	JT9D-7R4E4			135.19	159.2				*
B767-200ER	JT9D-7R4E			135.19	166.50				*
B767-300 & -300ER	CF6-80C2B2F			151.90					
B767-300 & -300ER	CF6-80C2B4				184.60				
B767-300 & -300ER	CF6-80C2B6				184.60				
B767-300 & -300ER	CF6-80C2B6 (fadec)	With N1 modifier		17B.30	184.60				
B767-300 & -300ER	PW4056 (FB2B)				184.60				
B767-300 & -300ER	PW4060 (FB2B)				184.60				
B767-300 & -300ER	RB211-524G			170.69	184.60				
B767-300 & -300ER	RB211-524H			170.79	1B4.60				
BAe ATP	P&W PW124A	Post mod AAN1010	22.93						
BAe ATP	P&W PW126	Post mod AAN 1010	22.93						
BAe ATP	P&W PW126	Pre mod AAN 1010	22.93						
BAe ATP	P&W PW126	AAN 1010 and beta-cam ABA493	22.93						
BAe ATP	P&W PW126A	AAN 1010 and beta-cam ABA493	22.93						
BAe Jetstream 3100	Garret TPE 331		6.95						
BAe1-11 Series 200	Spey 506-14 A, AW or D	With mod.5320 Parts A,D & E			38.29				
BAe1-11 Series 300	Spey 511-14 or -14W	With mod.5320 Parts A, B, D & E			37.71	40.30			
BAe1-11 Series 400	Spey 511-14 or -14W	With mod.5320 Parts A, B, D & E			37.71	40.60			
BAe1-11 Series 475	Spey 512-14DW	With mod.5320 Parts A, B, D & E					44.45		
BAe1-11 Series 500	Spey 512-14 DW	With mod.5320 Parts A, B, D & E				42.60	47.60		
BAe1-11 Series 510	Spey 512-14 E	With mod.5320 Parts A, B, D & E				42.60			
BAe125- 800	TFE-731-5R-1H		12.43						
BAe125- 800	TFE-731-5R-1H	With DH Reverser	12.43						
BAe125- 800A	TFE-731-5R-1H	With DH Reverser	12.43						
BAe125-1000	PW305		14.06						
BAe146- 100	ALF 502R-3		34.47						
BAe146- 100	ALF 502R-4		34.47						
BAe146- 100	ALF 502R-5	Plus eng. option71/1	37.31						
BAe146- 100-20	ALF 502R-3		37.31						
BAe146- 100-20	ALF 502R-3	Plus eng. option71/1	37.31						
BAe146- 100-20	ALF 502R-3A	Plus eng. option71/1	37.31						
BAe146- 100-20	ALF 502R-4		37.31						
BAe146- 100-20	ALF 502R-4	Plus eng. option71/1	37.31						
BAe146- 100-21	ALF 502R-5		37.31						
BAe146- 100-31	ALF 502R-5	Plus eng. option71/1	38.10						
BAe146- 100A	ALF 502R-3A	Plus eng. option71/1	37.31						
BAe146- 200	ALF 502R-3	Plus eng. option71/1	40.60						
BAe146- 200	ALF 502R-3A	Plus eng. option71/1	40.60						
BAe146- 200	ALF 502R-5	Plus eng. option71/1	42.18						
BAe146- 300	ALF 502R-5	Plus eng. option71/1	43.09						
Beechcraft Kingair C90A	PW PT6A-21		4.58						
Beechcraft Super King Air 200	PW PT6A-135		4.94						
Canadair CL-600 Challenger	CF34-3A		20.46						
Canadair CL-601 Challenger	CF34-1A		19.10						
Caravelle B3	JT8D-7					53.9B			
Caravelle B3	JT8D-9					56.97			
CASA C-212-CB	Garret TPE 331-5-251C	Full Power	6.49						
CASA C-212-CC	Garret TPE 331-10-501C	Full Power	7.44						
CASA CN-235	GE CT7-7A	Full Power	14.42						
Cessna 500/501 Citation I	JT15D-1/1A		5.35						
Cessna 550 Citation II	JT15D-4		6.40						
Cessna 650 Citation III	TFE731-3B-100S		9.98						
Concorde	RR Olympus 593 Mk610							185.07	
Convair 580	Allison 501-D13H		26.40						
Dassault Mercure 100A	JT8D-15					54.52			
Dassault Mercure 100B	JT8D-15					56.70			
DC10-10/15	CF6-50C2-F				206.40				
DC10-10/15	CF6-6K					206.40			
DC10-30	CF6-50C					E			
DC10-30/-30F	CF6-50A						E		
DC10-30/-30F	CF6-50C1						267.62		
DC10-30/-30F	CF6-50C2					267.60			
DC10-30/-30F	CF6-50C2-R					259.45			
DC10-30/-30F	CF6-50C2B					289.40			

DEPARTURES			**Maximum certificated take off weight - tonnes**					
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16
Aeroplane	**Engine**	**Remarks**						
DC10-40	JT9D-20					240.40		
DC10-40	JT9D-20J					Ĕ		
DC10-40	JT9D-59A					234.39	259.50	
DC8-62	JT3D-7	W/ADC QN Hushkit					154.45	
DC8-62	JT3D-7	W/TNC QN Hushkit					151.95	
DC8-63	JT3D-7	BAC/MGM Hushkit					160.12	
DC8-71	CFM56-2-C1				148.78			
DC8-71	CFM56-2-C5				147.42			
DC8-72	CFM56-2-C1				158.76			
DC8-73	CFM56-2-C1				161.03			
DC9-10	JT8D-7					37.06		
DC9-10	JT8D-7/-7A					37.06		
DC9-10(ABS)	JT8D-7/-7A/-7B			41.14				
DC9-14/15	JT8D-7/7A	Hardwall			41.14			
DC9-30	JT8D-11	Hardwall				48.99		
DC9-30	JT8D-11/9/15	-9 all with nac. treated to SCN3891 & SCN3				48.99		
DC9-30	JT8D-17					48.99		
DC9-30	JT8D-9	Hardwall				51.63		
DC9-40	JT8D-11					51.71		
DC9-40	JT8D-15					51.71		
DC9-50	JT8D-17						54.34	
DH Twin Otter DHC-6	PW PT6A-20		5.25					
DHC-7-101 Dash 7	P&W PT6A-50	Full Power	19.50					
DHC-7-103 Dash 7	P&W PT6A-50	Full Power	19.96					
DHC-8-101 Dash 8	UACL P&W PW120 or PW120A		14.97					
DHC-8-102 Dash 8	UACL P&W PW120 or PW120A		15.65					
DHC-8-311 Dash 8	UACL P&W PW123		19.50					
Embraer Bandeirante EMB-110	PW PT6A-34		5.67					
Embraer EMB-120	P&W PW-115		11.50					
Embraer EMB-120	P&W PW-118		11.50					
Falcon 10	TFE 731-2		8.30					
Falcon 20	CF700-20-2			13.02				
Falcon 200	ATF3-6-4C		14.51					
Falcon 50	TFE 731-2		17.60					
Falcon 50	TFE731-3-1C		18.59					
Falcon 900	TFE 731-5A		20.64					
Falcon 900	TFE 731-5AR-1C		20.64					
Falcon 900B	TFE 731-5BR-1C		20.64					
Fokker F27 MK200,400,500,600	RR Dart 536-7R or 536-7		20.82					
Fokker F27 MK200,400,500,600	RR Dart MK.532 or 535		20.82					
Fokker F27 Mk600	RR Dart 532-7R			20.41				
Fokker F28 MK0100	TAY 620-15		47.18					
Fokker F28 MK0100	TAY 650-15		49.90					
Fokker F28 Mk1000/2000	Spey Mk555-15						29.48	
Fokker F28 Mk4000	Spey Mk555-15H				33.11			
Fokker F28 Mk4000	Spey Mk555-15P					33.11		
Gulfstream G-I	RR Dart Mk 529		Ĕ					
Gulfstream G-II	RR Spey 511-8					29.70		
Gulfstream G-II	RR Spey 511-8	With tip tanks				Ĕ		
Gulfstream G-IIB	RR Spey 511-8					Ĕ		
Gulfstream G-III-IIB	RR SPEY 511-8					31.62		
Gulfstream G-IV	Tay 610-8		32.52					
Gulfstream G-IV	Tay 611-8		33.20					
Herald	RR Dart Mk 527			19.50				
HS 748-2A	RR Dart 532-2				20.19			
HS 748-2B	535-2 or 536-2				Ĕ			
HS 748-2B	535-2 or 536-2				Ĕ			
HS 748-2B	RR Dart 534-2,				21.09			
HS 748-2B	RR Dart 534-2,	With either BAe mod. 6408 or 6517		21.09				
HS125 Series 600A	Viper 601-22	Mod. 252469			11.57			
HS125 Series F3B	TFE-731-3-1H	Eng. mod.252603	9.84					
HS125 Series F400	TFE-731-3-1H	Eng. mod.252551	10.71					
HS125 Series F600B	TFE-731-3-1H	Eng. mod.252469	11.57					
HS125-700A/-700B	TFE-731-3-1H		11.57					
Il-62M	D-30Ku	With noise suppressors					107.00	
Il-76T(TD)	D-30KP(D-30KP 2 ser.)						151.50	
Il-86	NK-86							210.01
L1011-1	RB211-22B				195.05			
L1011-100	RB211-22B					211.37		
L1011-200	RB211-524B					211.34		
L1011-385-1 -15	RB211-22B					211.37		
L1011-385-1 -15 193T	RB211-22B				204.09	211.50		
L1011-385-1-14 & -15	RB211-22B(+SB 72-8700)					215.00		
L1011-500	RB211-524B					224.98		
L1011-500	RB211-524B3					226.60		

DEPARTURES			Maximum certificated take off weight - tonnes						
		Noise Level Band (EPNdB):	<90	90-92.9	93-95.9	96-98.9	99-101.9	>101.9	
		Quota Count:	QC/0	QC/1	QC/2	QC/4	QC/8	QC/16	
Aeroplane	Engine	Remarks							
L1011-500	R8211-52484					231.33			
Learjet 23	CJ610-1/-4				5.67				
Learjet 24	CJ610-1/-4					5.90			
Learjet 24/24D	CJ610-6				6.12				
Learjet 24D	CJ610-6					6.12			
Learjet 24E	CJ610-6				5.85				
Learjet 24F	CJ610-6				6.12				
Learjet 24F-A	CJ610-6				5.67				
Learjet 25	CJ610-6					6.80			
Learjet 25 B/C/D/F XR	CJ610-6/8A					7.39			
Learjet 28/29	CJ610-8A					6.80			
Learjet 35/36	TFE 731-2-2B		8.16						
Learjet 35A	TFE 731-2-2B		8.04						
Learjet 35A/36A	TFE 731-2-2B		8.30						
Learjet 55	TFE 731-3A-2B		9.51						
Learjet M55	TFE 731-3A	With Aeronca thrust reverser	9.57						
Learjet M55	TFE 731-3A		9.75						
Learjet M55C	TFE 731-3A-3AR	With reverser	9.75						
Learjet M55C	TFE 731-3A-3AR -38	With reverser	9.75						
Lockheed C130: see L100-30						E			
Lockheed L 100-30 (Hercules)	Allison 501-D22A	Full Power				70.31			
Lockheed L 118A Electra	Allison 501D-13			51.26					
Lockheed L 118C Electra	Allison 501D-13				52.62				
MD-11	CF6-80C2D1F				280.30				
MD-11	PW4460				280.30				
MD-80	JT8D-209			63.50					
MD-80	JT8D-217			63.50	72.80				
MD-80	JT8D-217A			63.50	72.80				
MD-80	JT8D-217C			63.50	72.80				
MD-80	JT8D-219			63.50	72.80				
MD-87	JT8D-217A			67.80					
MD-87	JT8D-217C			67.80					
MD-87	JT8D-219			63.50	67.80				
Pilatus 8ritten-Norman Islande	LYC.0-540-E4C5		2.99						
Piper Aerostar PA-600P	LYC. IO-540-S1A5/-P1A5		2.72						
Piper Chieftain PA-31-350	LYC. TIO-540-J28D		3.18						
Piper Navajo PA-31	LYC. TIO-540-2AC		2.95						
Puma SA 330F/G	Turmo IVA				7.40				
Reims Cessna F404	TCM GTSIO-520-M		3.81						
SAAB SF340A	GE CT7-5A	Full power	12.25						
SAAB SF340A	GE CT7-5A2		12.70						
SAAB SF340A	GE CT7-7E	Full power	12.25						
Sabreliner 65	TFE 731-3R		10.89						
Sabreliner 80	CF700-2D-2			10.60					
Shorts 8elfast	RR Tyne 12			104.30					
Shorts SD330	P&W PT6A-45R		10.39						
Shorts SD360	P&W PT6A-65AR		12.00						
Shorts SD360	P&W PT6A-65R		12.00						
Shorts SD360-300	P&W PT6A-67R		12.29						
Swearingen Merlin III SA227-AC	TPE331-11U-601G		6.35						
TU-134	D-30 I ser.					45.00			
TU-134A	D-30 II ser.						47.00		
TU-134A-3	D-30 III ser.						49.00		x
TU-134B	D-30 II ser.						47.00		
TU-134B-3	D-30 III ser.						49.00		x
TU-154	NK-8-2u					98.00			
TU-154M	D-30 Ku-154	With noise suppressors				100.00			
Vanguard Freighter	RR Tyne Mk506			63.96					
Viscount	RR Dart 7/1 Mk525			32.89					
Yak-40	A1-25		16.00						
Yak-42	D-36	With noise suppressors			54.00				
Yukon						E			

Key: E = QC estimated; data not yet available
* = recent data
x = incomplete data; may be higher or lower certificated weights

NOTES

The proposed noise classification is based on ICAO Annex 16 Chapter 2, 3 and 5 noise certification schemes.

The noise certification data for each aircraft type has been used as follows:

Arrivals – Approach Certification Point Data minus 9 EPNdB (to put on an equivalent basis to departure noise certification points)

Departures	$\frac{\text{Sideline + Flyover}}{2}$		If Chapter 3 or Chapter 5
	$\frac{\text{Sideline + Flyover}}{2}$	+	1.75 EPNdB if Chapter 2 (to allow for difference in sideline noise certification point)

Propeller aircraft with MTOW not exceeding 5700kg (ie those not subject to Chapter 2, 3 or 5 criteria) and older propeller aircraft also not subject to these criteria have been listed according to assumptions based on noise data currently available.

__NB__ Operators wishing to query the classification of any particular aircraft type/engine mix during the consultation period should send details of the relevant noise certification data to:-

Mr P Kearsey
Head of Noise Certification
Civil Aviation Authority
Aviation House
South Area
GATWICK AIRPORT
West Sussex
RH6 0YR

APPENDIX 3

ARRANGEMENTS FOR DELAYED DEPARTURES AND EARLY ARRIVALS AND GUIDELINES FOR DISPENSATIONS FROM THE NIGHT RESTRICTIONS

1. The night restrictions will apply between the hours 2300-0700. They will prohibit movements by the noisiest types of aircraft in normal circumstances. However there will be arrangements to cater for delayed departures and early arrivals, which will be subject to monitoring. During the period 2330-0600 aircraft movements will be restricted by a seasonal quota. Each movement will count a certain number of units against the quota depending on the quota classification of the aircraft used (the quota classification, QC, of each aircraft which is shown in Appendix 2). In certain circumstances dispensations may be given for movements not to count against the quota. This Appendix gives details of the proposed arrangements.

Application of Restrictions

2. The proposed night restrictions will apply as follows:-

2300-2330: Aircraft in groups QC/8 and QC/16 may not be scheduled to land or take off. Delayed departures and unscheduled landings by such aircraft will be permitted without penalty, subject to monitoring. Any operator abusing this privilege will be liable to withdrawal of facilities. (Delayed movements by aircraft in other groups may also be permitted.)

2330-0600: [The quota period] Aircraft except those in groups QC/8 or QC/16 may land or take-off. All movements in this period (ie including delayed departures and early arrivals of aircraft in groups QC/0, QC1, QC/2 and QC/4 will count against the quota according to the classification of the relevant aircraft ie some movements count 0 (effectively exempt) others 1, 2, or 4, unless a dispensation is given in accordance with the guidelines set out at paragraphs 6 to 18 below. Delayed departures by aircraft in groups QC/8 and QC/16 will not be permitted in any but the most exceptional circumstances.

0600-0700: Aircraft in group QC/16 may not be scheduled to land or take-off. Aircraft in any group except QC/16 scheduled to arrive after 0630 but arriving before 0600 will normally be permitted to land without counting against the quota, subject to monitoring. Any operator abusing this privilege will be liable to withdrawal of facilities. Aircraft in any group except QC/16 scheduled to arrive between 0600 and 0630 but arriving prior to 0600 will be permitted to land but will count against the quota according to their QC/classification. Aircraft in group QC/16 scheduled to arrive after 0700 but arriving in the period 0600-0700 will normally be permitted to land, subject to monitoring. Any operator abusing this privilege will be liable to withdrawal of facilities.

MOVEMENTS WHICH MAY BE GIVEN DISPENSATIONS FROM THE NIGHT RESTRICTIONS

CURRENT RESPONSIBILITIES OF THE AIRPORT OPERATOR

Emergencies

3. Flights involving emergencies where there is an immediate danger to life or health, whether human or animal, are excluded automatically from night restrictions irrespective of the type of aircraft involved.

Exceptional Circumstances

4. The airport companies have been given delegated powers under Section 78(4) (a) of the Civil Aviation Act 1982 to disregard night movements in certain exceptional circumstances. These currently are:-

(i) delays to aircraft which are likely to lead to serious congestion at the aerodrome or serious hardship or suffering to passengers or animals where the occasion on which the aircraft is about to take-off or land would otherwise exceed the maximum number permitted as published in the Noise Restrictions Notice;

(ii) delays to aircraft resulting from widespread and prolonged disruption of air traffic.

5. We propose that these arrangements should continue (subject to one alteration described in paragraph 7 below) but that the following guidelines should be borne in mind in considering requests for disregarding movements. The proposed guidelines embody current practice.

GUIDELINES

Hardship

6. Airport operators are expected to use their own judgement as to what constitutes serious hardship as covered in 4 (i) above. Serious hardship or suffering is intended to cover cases where passengers are subjected to long delays when the terminal buildings are overcrowded and their facilities strained and insufficient hotel accommodation is available. The minimum number of flights required to reduce overcrowding to a tolerable level should be disregarded. Inconvenience to passengers does not constitute hardship.

7. Delays giving rise to serious hardship occur infrequently but they may occur at any time during the season. We therefore propose that dispensations for hardship can be given at any time during the season. The previous requirement for the quota to have been fully used would in any case no longer be appropriate. The new quota is intended to last for a whole season and is not subdivided in any way. This should not lead to an increase in dispensations for hardship; but would be monitored to ensure it is used properly.

8. Delayed cargo flights (other than those with animals meeting the criteria in 4i) and extra night shuttle flights to meet demand are not allowed to be disregarded. All such movements must count against the quota according to the number of noise units in their quota classification.

Air Traffic Disruption

9. This is intended to cover widespread and prolonged disruption affecting air traffic flow in several countries, and not a localised, short-lived problem. It would include strikes by Air Traffic controllers in other countries, but not strikes by baggage handlers or delays arising from additional security checks which should be taken into account when planning operations. Such occurrences are not abnormal and provision should be made within the quota to cover these and other operational difficulties which cannot be predicted precisely but which experience indicates can be expected to occur.

10. It would also include initial air traffic disruption arising from major political difficulties abroad. Dispensations would not be appropriate when aircraft operators had time to rearrange their schedules.

11. All dispensations in times of air traffic disruption (whether ATC, political crisis etc) are NET ie any movements scheduled for the night period but which do not occur (or occur in the daytime) because of that disruption release part of the quota - movements specially permitted to take place at night because of the disruption must be offset against this, only the excess counting as dispensations.

12. ATC congestion at an airport arising from a build-up of delayed landings because of fog, and diversions from other airports for the same reason, are accepted as emergencies, provided an aircraft had taken off unaware that its intended destination was unavailable. Problems arising from snow and ice are not in themselves sufficient reason for dispensations, especially for departures (when the likelihood of adverse weather conditions should be taken into account in operations planning).

FURTHER EXEMPTIONS

13. The Department has retained the right to give exemptions from night restrictions to specific flights. This right has been exercised mainly where the aircraft is carrying VIP passengers or cargo intended for emergency relief. These rights may also be delegated to the airport operators. The following guidelines will apply whoever makes the decision.

VIPs

14. These include:-

Members of the Royal Family using aircraft of the Queen's Flight (repositioning flights by such aircraft are excluded);

UK Government ministers and Service Chiefs of Staff;

members of foreign Royal Families, Heads of State, senior ministers, on an official visit or business where the person is being met by a Government representative; (status to be checked with FCO when in doubt);

but exclude show business and sports celebrities.

RELIEF FLIGHTS

15. These include flights carrying cargoes such as medical supplies required urgently for the relief of suffering during a period of emergency, as, for example, during the Kurdish refugee crisis or the Turkish earthquake disaster. They do not automatically include medical or other supplies intended for humanitarian purposes where there is no particular urgency. They would not include the carriage of the Press and associated

equipment to trouble spots.

MILITARY AIRCRAFT WAR/HOSTILITIES

16. Movements by military aircraft should not take place at night in peacetime unless either the aircraft has been classified for night operation or special arrangements have been given prior approval by the Department of Transport.

17. Dispensations have been given where the outbreak of war or similar hostilities requires contingency arrangements, as occurred with the Gulf War, when troop movements at Heathrow were planned. Similarly dispensations have been given for civil aircraft affected by hostilities, for example, when war damage at Ljubljana airport seriously disrupted flights returning to the UK. Dispensations in such instances would not be appropriate if airlines had had time to assess the situation and make alternative arrangements.

MONITORING

18. All dispensations will be subject to monitoring as proposed in paragraph 39 of the consultation paper.

THE DEPARTMENT
OF TRANSPORT

PRESS NOTICE NO: 162

DATE: 6 May 1994

NIGHT FLYING RESTRICTIONS AT HEATHROW, GATWICK AND STANSTED

John MacGregor, Secretary of State for Transport, today announced his decision on night flying restrictions to apply at Heathrow, Gatwick and Stansted from 23 October 1994.

In a written answer to a parliamentary question from Bob Dunn MP (Dartford) Mr MacGregor said:-

"The proposals I published on 10 November 1993 for revised night flying restrictions covered the arrangements for the 1994 summer season and those to apply from winter 1994/5 until the end of the summer 1998 season. We acknowledged the need for an early decision on the 1994 summer season by separating the proposals in the consultation paper and our conclusions for that season were announced by my hon Friend (and my noble Friend) on 1 February. The summer season commenced on 27 March and continues until 23 October. The conclusions I am announcing today apply to the following 4 years.

"Our November consultation paper proposed that there should be a movements limit for each airport with the quota system based on the noise certification of aircraft also applying as a supplementary control. An alternative approach was also set out which would dispense with the need for quotas but impose subsidiary limits on movements by the noisier types of aircraft. As in respect of summer 1994, the responses for the following 4 years showed very little support for this alternative approach. I have therefore concluded that the night restrictions should continue to be in the form of movements limits supplemented by quotas. The classification of aircraft according to the quota count system, the hours of the night restrictions and the night quota period will remain as I announced on 6 July 1993.

THE DEPARTMENT OF TRANSPORT
2 MARSHAM STREET LONDON SWIP 3EB
TELEPHONE 071 276 3000

"The night-time movements limits and quotas for each airport for each season will be:-

HEATHROW	Movements Limit	Quota		Movements Limit	Quota
Winter			Summer		
1994-5	2550	5000	1995	3250	7000
1995-6	2550	5000	1996	3250	7000
1996-7	2550	5000	1997	3250	7000
1997-8	2550	5000	1998	3250	7000

GATWICK	Movements Limit	Quota		Movements Limit	Quota
Winter			Summer		
1994-5	3000	6820	1995	8050	9550
1995-6	3750	6820	1996	9100	9550
1996-7	4500	6820	1997	10150	9550
1997-8	5250	6820	1998	11200	9550

STANSTED	Movements Limit	Quota		Movements Limit	Quota
Winter			Summer		
1994-5	4640	3000	1995	6750	4200
1995-6	4820	3000	1996	7000	4200
1996-7	5000	3000	1997	7000	4200
1997-8	5000	3000	1998	7000	4200

"The quotas for Heathrow, Gatwick and Stansted remain as I announced on 6 July 1993. The movements limits for Heathrow and Gatwick are as proposed in the November 1993 consultation. The Stansted movements limits I am announcing for the first three seasons are slightly lower than those proposed, as was the movement limit for this summer announced on 1 February. I also confirm that the movements limits and quotas for Stansted have been set in the light of the present limit of 78 000 passenger Air Transport Movements (ATM). I will review both the movements limits and the quotas if Parliament should approve an increase in the Stansted ATM limit before summer 1998.

"The 10% end of season flexibility (with penalty for excess thereafter) will apply, as proposed, to the movements limits as well as to the quotas. The arrangements for dispensations also continue to apply. Experience of operating under the guidelines published on 6 July 1993 has shown the need for some minor amendments. These do not change the circumstances in which a dispensation might be considered but provide some further clarification for operators. I have placed a copy of the revised guidelines in the House Library.

"I have given careful consideration to the responses from people living around the three airports, the local authorities, environmental groups and local organizations and other representative bodies. I have also given careful consideration to the responses from airlines, aviation bodies and other user organizations. In general, the responses were more polarised than hitherto reflecting not just the particular interests of those putting them forward but also, I am sure, the length of time for which we have been debating the issues. My aim is still to strike a fair balance between the different interests: to protect local people from excessive aircraft noise at night, without unnecessarily impeding the airline industry. The movements limits and quotas which I have announced today for the three airports should achieve this. However, as explained in the November 1993 Consultation paper, there are difficulties in setting appropriate movements limits several years ahead. I therefore confirm that, as proposed, the Government will be prepared to consider adjustments to the movements limits prior to 1998 in the light of advice from the airport consultative committees.

I fully acknowledge that aircraft noise at night may disturb the sleep of some people near airports and that it is a matter of concern to many others who fear that they might be disturbed. However, a complete ban on night flights could not be justified. For many years, it has been the Government's policy to allow night operations to continue while seeking to ensure that eventually all such operations would be carried out by quiet types of aircraft. In my announcement on 6 July last year I drew attention to the great strides that had been made by the industry in phasing out older noisier aircraft and to the regulations to ensure the phasing out between 1995 and 2002 of what are now described as "the noisier Chapter 2 jets". Those are aircraft once regarded as quiet.

"The arrangements which I have confirmed today continue the policy of encouraging the use of the quietest types of aircraft. This will permit some increase in movements provided the quietest types of aircraft are used but the noise quotas will keep overall night noise levels well below those for summer 1988 at Heathrow and Gatwick. The movements limits provide overall control on the number of movements at night. I understand the worries expressed by local people that substantial growth of the number of movements, irrespective of the noise performance of the aircraft concerned, might bring additional disturbance from the ground operations associated with those aircraft. I therefore indicated in the November 1993 consultation paper that we were considering whether to initiate a new study into ground noise at airports at night to see whether further measures of amelioration or control might be appropriate. This has been generally welcomed. I therefore confirm that I have asked my officials to consider further with BAA plc, who are responsible for measures to control ground noise at Heathrow, Gatwick and Stansted, the scope and form that such a study might take, and to present proposals to me by the end of this year.

"I also confirm that the monitoring and reporting arrangements announced on 6 July 1993 and 1 February 1994 are underway. These are being overseen by the Department's Aircraft Noise Monitoring Advisory Committee (ANMAC) and comprise

(a) a review of the longstanding departure noise levels of 102 PNdB (night) and 110 PNdB (day), 89 and 97 dBA respectively;

(b) the monitoring of noise performance of aircraft covered by the QC classification;

(c) reports by each airport to their consultative committee on all night movements, whether covered by quota, or by exempt types of aircraft, or granted exemptions or dispensations;

(d) suitable confirmation that the reporting arrangements cover the full audit trail;

(e) an initial report by ANMAC on the performance of the new night restrictions system after the first year of operation.

NOTE TO EDITORS

A copy of the revised guidelines on dispensations is attached

Press Enquiries: 071-276 0888 ; out of hours: 071-873 1985
Public Enquiries: 071-276 0800

ANNEX

ARRANGEMENTS FOR DELAYED DEPARTURES AND EARLY ARRIVALS AND GUIDELINES FOR DISPENSATIONS FROM THE NIGHT RESTRICTIONS

1. The night restrictions will apply between the hours 2300-0700. They will prohibit movements by the noisiest types of aircraft in normal circumstances. However there will be arrangements to cater for delayed departures and early arrivals, which will be subject to monitoring. During the period 2330-0600 aircraft movements will be restricted by a movements limit and a quota. Each movement will count a certain number of units against the quota depending on the quota classification of the aircraft used (the quota classification, QC, of each aircraft). In certain circumstances dispensations may be given for movements not to count against the movements limits or the quota. This paper gives details of the arrangements.

Application of Restrictions

2. The proposed night restrictions will apply as follows:-

2300-2330:	Aircraft in groups QC/8 and QC/16 may not be scheduled to land or take off. Delayed departures and unscheduled landings by such aircraft will be permitted without penalty, subject to monitoring. Any operator abusing this privilege will be liable to withdrawal of facilities. (Delayed movements by aircraft in other groups may also be permitted.)
2330-0600: [The night quota period]	Aircraft except those in groups QC/8 or QC/16 may land or take-off. All movements in this period (ie including delayed departures and early arrivals of aircraft

in groups QC/0.5, QC/1, QC/2 and QC/4 except in circumstances described below) will count against the movements limit and will count against the quota according to the noise unit classification of the relevant aircraft ie some movements count 0.5 others 1,2, or 4, unless a dispensation is given in accordance with the guidelines set out at paragraphs 6 to 18 below.. Delayed departures by aircraft in groups QC/8 and QC/16 will not be permitted in any but the most exceptional circumstances.

0600-0700: Aircraft in group QC/16 may not be scheduled to land or take-off. Aircraft in any group except QC/16 scheduled to arrive after 0630 but arriving before 0600 will normally be permitted to land without counting against the quota, subject to monitoring [but will count against the movements limit]. Any operator abusing this privilege will be liable to withdrawal of facilities. Aircraft in any group except QC/16 scheduled to arrive between 0600 and 0630 but arriving prior to 0600 will be permitted to land but will count against the quota according to their QC/classification. Aircraft in group QC/16 scheduled to arrive after 0700 but arriving in the period 0600-0700 will normally be permitted to land, subject to monitoring. Any operator abusing this privilege will be liable to withdrawal of facilities.

MOVEMENTS WHICH MAY BE GIVEN DISPENSATIONS FROM THE NIGHT RESTRICTIONS

Emergencies

3. Flights involving emergencies where there is an immediate danger to life or health, whether human or animal, are excluded automatically from night restrictions irrespective of the type of aircraft involved.

Exceptional Circumstances

4. The airport companies have been given delegated powers under Section 78(4) (a) of the Civil Aviation Act 1982 to disregard night movements in certain exceptional circumstances. These currently are:-

(i) delays to aircraft which are likely to lead to serious congestion at the aerodrome or serious hardship or suffering to passengers or animals;

(ii) delays to aircraft resulting from widespread and prolonged disruption of air traffic.

5. The following guidelines should be borne in mind in considering requests for disregarding movements.

GUIDELINES

Hardship

6. Airport operators are expected to use their own judgement as to what constitutes serious hardship as covered in 4 (i) above. Serious hardship or suffering is intended to cover cases where passengers are subjected to long delays when the terminal buildings are overcrowded and their facilities strained and insufficient hotel accommodation is available. The minimum number of flights required to reduce overcrowding to a tolerable level should be disregarded. Inconvenience to passengers does

not constitute hardship. [The same considerations apply if serious hardship at an originating airport is to be a reason for disregarding a landing.]

7. Delays giving rise to serious hardship occur infrequently but they may occur at any time during the season. Dispensations for hardship may therefore be given at any time during the season. [This should not lead to an increase in dispensations for hardship but will be monitored to ensure it is used properly.]

8. Delayed cargo flights (other than those with animals meeting the criteria in 4i) and extra night shuttle flights to meet demand may not be disregarded. All such movements must count against the quota according to the number of noise units in their quota classification.

Air Traffic Disruption

9. This is intended to cover widespread and prolonged disruption affecting air traffic flow in several countries, and not a localised, short-lived problem. It would include strikes, by Air Traffic controllers in other countries, but not strikes by baggage handlers or delays arising from additional security checks which should be taken into account when planning operations. Such occurrences are not abnormal and provision should be made within the quota to cover these and other operational difficulties which cannot be predicted precisely but which experience indicates can be expected to occur.

10. It would also include initial air traffic disruption arising from major political difficulties abroad. Dispensations would not be appropriate when aircraft operators had time to rearrange their schedules.

11. All dispensations in times of air traffic disruption (whether ATC, political crisis etc) are NET ie any movements scheduled for the night period but which do not occur (or occur in the daytime) because of that disruption release part of the quota - movements specially permitted to take place at night

because of the disruption must be offset against this, only the excess counting as dispensations.

12. Unscheduled Landings in the night period due to ATC congestion at an airport arising from fog or when low visibility procedures are in operation, and diversions from other airports for the same reason, are accepted as emergencies, provided an aircraft had taken off unaware that its intended destination was unavailable. [Again only the extra movements above the number already scheduled may be counted as emergencies.] Problems arising from snow and ice are not in themselves sufficient reason for dispensations, especially for departures (when the likelihood of adverse weather conditions should be taken into account in operations planning).

FURTHER EXEMPTIONS

13. The Secretary of State retains the right to give exemptions from night restrictions to specific flights. This right has been exercised mainly where the aircraft is carrying VIP passengers or cargo intended for emergency relief. These rights may also be delegated to the airport operators. The following guidelines will apply whoever makes the decision.

VIPs

14. These include:-

Members of the Royal Family;

UK Government ministers and Service Chiefs of Staff;

members of foreign Royal Families, Heads of State, senior ministers, on an official visit or business where the person is being met by a Government representative; (status to be checked with FCO when in doubt);

but exclude show business and sports celebrities.

Note: Repositioning flights preceding or following the use of that aircraft for carriage of a VIP may not be disregarded if the aircraft is classified as QC/8 or QC/16 or is a VC10.

RELIEF FLIGHTS

15. These include flights carrying cargoes such as medical supplies required urgently for the relief of suffering during a period of emergency, as, for example, during the Kurdish refugee crisis or the Turkish earthquake disaster. They do not automatically include medical or other supplies intended for humanitarian purposes where there is no particular urgency. They would not include the carriage of the Press and associated equipment to trouble spots.

MILITARY AIRCRAFT WAR/HOSTILITIES

16. Movements by military aircraft should not take place at night in peacetime unless either the aircraft has been classified for night operation or special arrangements have been given prior approval by the Department of Transport.

17. Dispensations have been given where the outbreak of war or similar hostilities requires contingency arrangements, as occurred with the Gulf War, when troop movements took place through Heathrow. Similarly dispensations have been given for civil aircraft affected by hostilities, for example, when war damage at Ljubljana airport seriously disrupted flights returning to the UK. Dispensations in such instances would not be appropriate if airlines had had time to assess the situation and make alternative arrangements.

MONITORING

18. All dispensations will be subject to monitoring.